present only little smoothed the way of the open-hearth process. The ground thereof will be sought partly in that one overrated the difficulties which the production of such large quantities of steel in the open-hearth plants involved. Of course, if nowadays an open-hearth furnace were not able to produce more than 50 to 60 tons of steel per diem, as was formerly the case, so one could attribute a certain justification to a hesitancy against working up very large quantities of pig iron in open-hearth furnaces, but the conditions have also nowadays become different, as 0. Thiel has likewise pointed out. To-day data are at hand, according to which outputs of 130 to 150 tons of ingots per 24 hours are produced in ordinary fixed 30-ton open-hearth furnaces, and therefrom it is clear that a plant for working up 1,000 tons of pig iron per diem would not be extraordinarily large, and thereby its superintendence interfered with, ten open-hoartli furnaces, of which eight working and two in reserve, sufficing for this quantity of pig iron. The plant for all these ten furnaces could scarcely be more costly than the plant of a new blast furnace.

A further condition which unfavourably influenced the mind as to the open-hearth process, lies in the general broad view that the iron content of the very dear (because pure) ore employed in the open-hearth furnace is only very incompletely utilised. In order to test this view as to its justification, let the last example working with basic Bessemer pig in the open-hearth furnace be still further gone into.

In the slag of the dephosphorising process in the open-hearth furnace, of a weight of about 18 per cent, of the metal charged there is contained about 0*7 per cent. Fe (taken on the weight of the charge). In the second operation, the quantity of slag amounts to about 10 to 15 per cent, on the weight of the iron, and this contains 10 per cent. Fe. Thus

herewith there is lost about 1 to 1*5 per cent. Fe (taken on the weight of the charge). Thus the total loss amounts to

0*7 + 1 to 1-5=1-7 per cent, to 2-2 per cent. Fe.

Now since 26*24 per cent. Fe203, corresponding to 26*24 x 0-7=18-37 per cent. Fe in the form of pure ore, must be added to pig iron, thus only 12 to 10 per cent, of this iron